OCTOBER 1953

FIREMEN

FIFTY-EIGHTH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

VOLUME 20, NUMBER 10; COPYRIGHT 1953 NATIONAL FIRE PROTECTION ASSOCIATION PRINTED IN U. S. A.

11 PROVEN WAYS

1 M.S.A. PNEOLATOR

ACCEPTED COUNCIL ON PHYSICAL MEDICINE and REHABILITATION AMERICAN MEDICAL ASSOCIATION

Because the Pneolator is the nearest automatic approach to natural respiration it assures maximum chance of recovery in all cases of arrested breathing. Providing oxygen for the lungs at the pre-selected amount and pressure, the Pneolator breathes for the asphyxiated patient—aids the patient to full recovery. There is no "suction" cycle. Exhalation takes place by the normal passive return of the respiratory muscles. The Pneolator's intermittent positive pressure is effective in treating patients whose lungs are irritated by corrosive gases. Immediate change over to inhalator when the patient starts breathing.

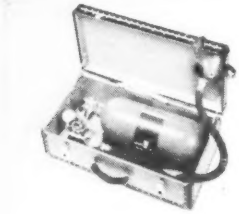
Light in weight, the Pneolator can be conveyed immediately to the patient . . . conserving the vital minutes that may make the difference between recovery and tragedy. Ask for Bulletin No. CH-2, and a demonstration.

NOTE: The first few minutes after breathing has ceased are the most critical. Immediate application of manual artificial respiration should be started and continued until Pneolator is in use.

4 M. S. A. DEMAND MASK

Supplying compressed oxygen or certified pure air from a back-carried cylinder to facepiece, the M.S.A. Demand Mask provides complete breathing protection for a minimum of 30 minutes in toxic or oxygen-deficient atmospheres. Simple to use, completely dependable. U. S. Bureau of Mines Approved. Bulletin No. B-20.

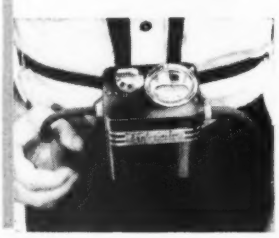
5 M. S. A. DEMAND OXYGEN UNIT



Compact, demand-type breathing apparatus designed for economical administration of oxygen. Completely self-contained, portable. Requires no auxiliary parts or fittings for use. Ideal for application in cases of smoke inhalation, heart failure, and carbon monoxide inhalation. Accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association.

6 M. S. A. ALL-SERVICE MASK ®

For fire-fighting efforts in air contaminated with smoke and gas, but where sufficient oxygen is present to support life, the "All-Service" Mask assures dependable breathing protection to the wearer. Available with the M.S.A. "Cleartone" Speaking Diaphragm for clear speech transmittal. Bulletin No. EA-8.



7 M. S. A. EXPLOSIMETER ®

A compact, portable, easy-to-use instrument for checking suspected areas for explosive gases and vapors during fires and in general survey work. Body carrying straps, and one hand operation permit unhampered use. Easily read dial, rugged, simple to maintain. Bulletin No. DN-7.

MINE SAFETY APPLIANCES COMPANY

201 N. BRADDOCK AVENUE • PITTSBURGH 8, PA.

At Your Service: 76 BRANCH OFFICES IN THE UNITED STATES

MINE SAFETY APPLIANCES CO. OF CANADA, LIMITED

TORONTO, MONTREAL, CALGARY, EDMONTON, WINNIPEG, VANCOUVER, NEW GLASGOW, N.S.

Representatives in Principal Cities in Mexico, Central and South America—Cable Address: "Minsaf" Pittsburgh

to increase Your Fire Fighting Efficiency and Safety

2 M.S.A. CHEMOX®

Firemen equipped with the Chemox can enter and work in unbreathable or oxygen-deficient atmospheres with complete respiratory safety, because Chemox makes its own pure oxygen as the wearer breathes, from a replaceable chemical canister. Non-fogging lenses—no high pressure cylinder lines, or fittings. U. S. Bureau of Mines approved for 45 minutes minimum service per canister. Bulletin No. B-14.

3 M.S.A. STREAMLINED FIREMAN'S HELMET

Made of one-piece high pressure molded laminated bakelite, this popular helmet offers maximum protection against bumps and blows. It is light and comfortable to wear; withstands heat, water and chemicals; provides high dielectric strength against electrical hazards. Soft leather sweatband, adjustable crown hammock, self-ventilating. Bulletin No. DX-9.

8 M. S. A. FIRST AID KIT

Designed to meet all the requirements of fire department service, contents of the M.S.A. Kit are protected against dust, dirt, and moisture. Features a complete supply of emergency treatment for immediate application. Unit packages permit quick location, and economical replacement. Bulletin No. FA-100.

9 M. S. A. FOILLE SPRAY KIT

This kit is supplied with an efficient spray gun for quick application to burned areas, promptly easing pain and aiding in the control of shock. An ample supply of Foille in jars which connect to the spray gun and a complete assortment of first aid dressings and accessories are assembled in a weather-proof steel case. Bulletin No. FA-1-A.

10 M. S. A. FLOOD LAMP

Safe in gaseous atmospheres, this lamp combines brilliant, unfailing illumination with easy portability. Equipped with standard Edison Batteries in magnetically-locked steel container. Lamp housing is water and dust proof. Bulletin No. M-10.

11

Call the M. S. A. Man

on your every safety problem

. . . his job is to help you.

MSA

SAFETY EQUIPMENT HEADQUARTERS

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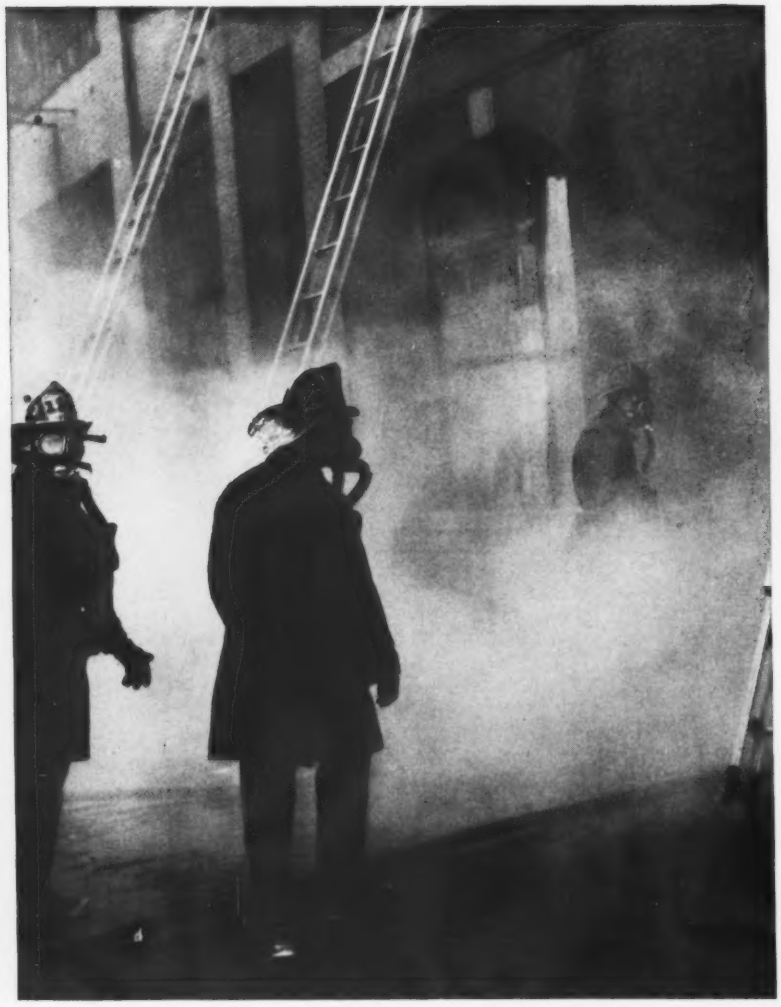


Philadelphia fire fighters find "Big Bertha" miracle-aid in cellar fire.

Big Show by "Big Bertha"

In the cellar of the burning building above, "Big Bertha" is putting on a big show.

Before she arrived, ordinary hose lines proved no help. Upon her entrance, the fire was controlled in minutes.

"Big Bertha", so christened by Deputy Fire Commissioner George Hink of Philadelphia, is a giant WaterFOG nozzle. Delivering 500 gallons of water a minute in a fire-eating mist, "Big Bertha" is ordinarily used on turrets, portable deluge sets or ladder pipes. It can be attached to regular hose lines by means of a Rockwood Swivel Handle Play Pipe and a Rockwood Ball Type Shut-Off.

This giant nozzle not only controls fires rapidly but reduces temperature of entire surrounding area, protects firemen from smoke inhalation — and speeds return of fire companies to their station. Put "Big Bertha" on *your* fire force — it is but one of many Rockwood portable fire-fighting items that engineer water to cut fire losses.

How Rockwood Engineers Water to Cut Fire Losses

A Solid Cone of WaterFOG is discharged by the Rockwood Type "B" 500 G.P.M. High Capacity WaterFOG Nozzle. Millions of fine water particles completely fill the cone preventing vapor pockets. As particles enter fire area, they turn into steam.

Rockwood Type B High Capacity WaterFOG Nozzle, combined with Swivel Handle Play Pipe and Ball Type Shut-Off, quickly connects to ordinary hose lines, thus enabling this powerful nozzle to be used in hard-to-reach areas such as cellars and on large flammable liquid fires.

SEND FOR THIS INFORMATIVE BOOKLET

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
88 Harlow Street
Worcester 5, Mass.

Please send me your illustrated booklet on Rockwood fire fighting products.

Name.....
Title.....
Company.....
Street.....
City.....
Zone.....State.....

ROCKWOOD SPRINKLER COMPANY

Engineers Water... to Cut Fire Losses

FROST-PROOF DESIGN

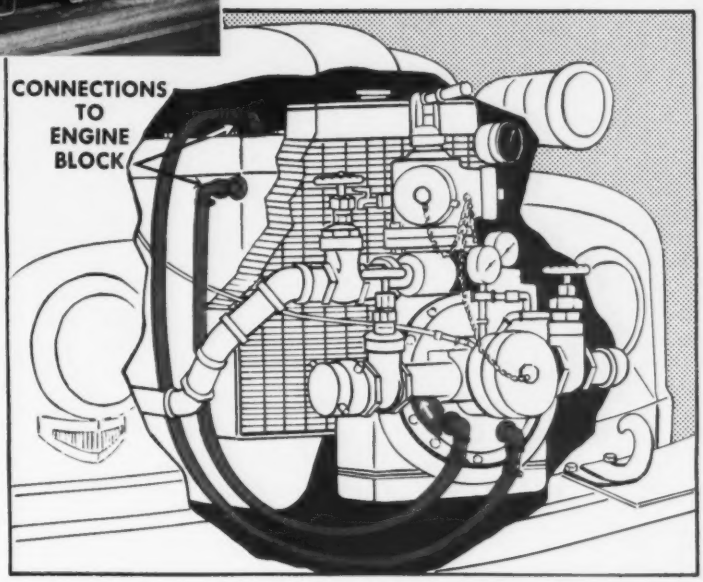
of Barton-American Type UA Front Mounted Fire Pump gives extra safety factor for winter operation

You *never* have to worry about your Barton-American Type UA Pump freezing! For this unique, effective *frost-proof design* gives you positive operation even in the coldest weather!

Water at engine temperature constantly circulates from engine cooling system through the cored suction head of the UA Pump. Even at sub-zero temperatures, this always keeps the pump well above the freezing point.

It's a closed system with no possible loss of radiator water or anti-freeze . . . operating on the same principle as a car heater.

In addition this feature of the UA Pump increases the summer cooling capacity of the system . . . gives you a cooler engine in hot weather as well as positive protection against freezing in cold weather!



Hose line circuit may vary with make of engine.

ONLY THE BARTON-AMERICAN TYPE UA PUMP GIVES YOU *ALL* THESE VALUABLE FEATURES:

- Is Easy to Install
- Fights Fires on the Move
- Gives Pressures to 400 lbs.
- Better Weight Distribution on Truck
- Gives You Unusual Economy
- Lets You Carry More Water or Equipment
- Effective Frost-Proof Design
- Both Volume and High-Pressure Fog Stream
- Positive Non-Slip Clutch

WRITE TODAY FOR UA PUMP BULLETIN NO. 8330-B

AMERICAN-MARSH PUMPS

BATTLE CREEK MICHIGAN

In Canada:
American-Marsh Pumps (Canada) Ltd., Stratford, Ont.

WICHITA FALLS, TEXAS, HAILS NEW HOWE APPARATUS

Like many, many other cities from coast to coast, Wichita Falls, Texas relies on Howe Fire Apparatus, as shown in the illustrations above. That's because Howe has always built dependable equipment . . . ever since 1872. Howe equipment is approved by the National Board of Fire Underwriters. High standards of workmanship and efficiency are a must. An alertness to the needs of fire fighters has enabled Howe to offer many firsts in the modernization of equipment. Have a Howe Representative give you full information on the type of equipment you need.

Write for Free literature and a Howe Catalog. *Look to Howe first for the latest in fire-fighting apparatus.* Address

Fire Department Receives Delivery of Howe Truck

Wichita Falls, Tex., July, 1953 —A new fire truck, boasting many of the newest tested fire-fighting devices, was delivered Friday to the Wichita Falls Fire Department.

The sleek machine was ordered from the Howe Fire Apparatus Company of Anderson, Ind., after the city council okayed the purchase.

Fire Chief Eugene C. White said the new truck is one in which any city in the nation could take pride. He said it would afford maximum safety to the industrial sector of the city, and that it would be placed in use at the No. 6 Station on Jefferson.

"This truck will help greatly in giving protection to the heavy industry and refinery district of Wichita Falls," Chief White commented. "We want to urge all of our citizens to see this machine. It will be at Central Station, Ninth and Ohio, for about 10 days before it is taken to the Jefferson Street Station.

This addition to the city's fire-fighting equipment brings to 12 the number serving Wichita Falls, not including the chief's car. It has a 750-gallon class "A" pumper and a 250 h.p. slow-speed Waukesha engine.

The truck is equipped with two booster reels of 150 feet each and provides two lines for one and one-half-inch hose as well as 1250 feet of two and one-half-inch hose. The cab can comfortably hold three persons.

HOWE

Member of FAM (Fire Apparatus Manufacturers Assn.)

HOWE

FIRE APPARATUS COMPANY

Dept. FM2, 1404 W. 22nd St., Anderson, Indiana

Firemen

Volume 20 Number 10

WARREN Y. KIMBALL, EDITOR
PAUL R. LYONS, ASSOCIATE EDITOR
HENRY S. GERE, ADVERTISING MANAGER

Published monthly for the fire service members of the
NATIONAL FIRE PROTECTION ASSOCIATION

A VOLUNTARY NON-PROFIT ORGANIZATION
60 BATTERYMARCH ST., BOSTON 10, MASS.

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HORATIO BOND	CHIEF ENGINEER
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Cover Photo

Cleveland, Ohio, fire fighters were astounded because there wasn't a greater death and injury toll when a violent underground explosion blasted through more than a mile of the West Side of the city on September 10. However, although an estimated damage of $5,000,000 resulted, only one woman was killed and 64 persons injured, 3 of them critically.

The explosion of undetermined origin occurred about 5:20 P.M. in a combination storm and sanitary sewer at the height of the evening "rush hour." Surface vehicular traffic and thousands of pedestrians were exposed to a violent eruption of pavement blocks and reinforced concrete pavement.

A telephone alarm from a doctor who was treating victims brought response from the Cleveland Fire Department under Chief Elmer A. Cain. Altogether more than 26 pieces of apparatus responded to subsequent alarms. The Lakewood Fire Department under Chief C. A. Delaney responded to a box alarm. Auxiliary units also assisted in rescue operations. Further details are reported on page 11 of this issue *(Cover photo by Cleveland Fire Prevention Bureau.)*

Twentieth Anniversary

Twenty years ago the first copies of *Volunteer Firemen* were mailed to members of the NFPA Volunteer Firemen's Section. This first issue, dated September-October, 1933, contained detailed reports of conflagrations in Ellsworth and Auburn, Maine, and at McPherson, Kansas; an article on water systems for rural fire protection; including a comparison of various small calibre hose streams; the story of the NFPA; and a report on state firemen's training activities for that summer.

The 12-page black and white publication became popular immediately. Within less than a year more than 5,000 members of the Volunteer Firemen's Section were subscribing to copies, and the 10,000 figure was passed by June, 1936. Horatio Bond, NFPA Chief Engineer, at that time was Editor, and Warren Y. Kimball, present Editor and Manager, NFPA Fire Services Department, became Associate Editor in 1937.

Experience proved that there was no defined line between the interests of the paid and volunteer fire service members of NFPA, so in 1946 the more inclusive title FIREMEN was adopted for the publication. Interest in the publication continued to grow through the years. Now when more than 2,000 fire departments, 25,000 fire fighters and nearly 5,000 other members of the fire service obtain the magazine each month through membership in the NFPA. The magazine is now averaging more than 36 pages per issue and in the past September a 64-page issue was circulated to 40,000 members of the fire service in fire departments in the United States and Canada.

Fire Protection in "Accredited" Hospitals

Recognition of the importance of fire protection in hospitals is included in the "Standards for Hospital Accreditation," issued with the August, 1953, Bulletin of the Joint Commission on Accreditation of Hospitals. Fire departments who may be concerned about hospitals in their communities may quote these standards if it is necessary to persuade hospital administrators to make corrective changes for safety from fire.

In the section devoted to administrative functions, the standards state that "fire protection shall be at least equal to the legal code; to attest to this fact the administrator shall exhibit a certificate issued within the past twelve months."

The standards are absolute prerequisites to accreditation of any hospital by the Commission which made major changes in its requirements in April, 1953. Member organizations of the Commission include the American College of Physicians, the American College of Surgeons, the American Hospital Association, the American Medical Association, and the Canadian Medical Association.

Fire departments desiring to improve conditions of fire safety in hospitals will find valuable information in the NFPA publication "Hospital Fire Safety" ($2.00), which includes revisions of NFPA standards pertinent to hospitals, a statistical analysis of hospital fires, and other material needed for reference in connection with inspection of hospital fire hazards, structural features, and the planning of improvements.

Canada Asks for "Spec" Performance

BECAUSE of a recently established "listing" program, fire departments in the Dominion of Canada can now have greater assurance of receiving adequate performance from newly purchased fire apparatus. The program was put into operation by the Dominion Board of Insurance Underwriters, Montreal, Quebec, after its Fire Protection Engineering Department had spent two years in developing the listing procedures. The first releases of listings were issued this past July to provincial fire marshals and "bureau" of association engineers.

J. N. Pryce, Director of Engineering at the Dominion Board, is directing operation of the service. He is a member of the NFPA Committee on Fire Department Equipment and of the Committee on Fire Fighting Apparatus of the Canadian Standards Association.

Of particular interest is the fact that the listing procedures include more than testing pump performance. Engineers also subject the apparatus to road tests, weigh the entire unit to detect possible chassis, axle and tire overloading, and examine equipment and design features to see that they conform to the complete specifications.

The Specification on Motor Fire Apparatus, formulated by the CSA Committee, is the basis for listing apparatus performance and design. This Specification is very similar to NFPA Standard No. 19 — "Specifications for Motor Fire Apparatus," which was prepared by a committee representing the National Fire Protection Association, the International Association of Fire Chiefs, and the National Board of Fire Underwriters.

IN ORDER to control listing procedures, labels showing pump performance are attached to the operator's panel. These also bear a listing serial number assigned by the Dominion Board for the model. The number refers to a given engine, transmission, pump and chassis combination. When listing is granted for a particular type of apparatus the manufacturer receives notification from the Dominion Board and similar notification is sent to each regional underwriting organization and to other interested parties upon request. When a piece of apparatus has been listed then all models of the same design may carry the "approved" name plate on the pump panel, showing the listing number and pump volume and speed figures at rated pressures.

The first pumper of Bickle-Seagrave, Ltd., to achieve listing. The listing plate may be seen over the pump panel. At left is J. N. Pryce, Director of the Fire Protection Engineering Department of the Dominion Board and at right is Al Brossard, General Manager, Bickle-Seagrave, Ltd., (Quebec). Unit is for the city of St. Jerome, Quebec.

Pumper undergoing 12-hour test observed by a Dominion Board engineer.

Manufacturers may alter the body to suit the demand of individual fire departments providing that the apparatus still complies with specifications. Acknowledgment of listing of each individual unit can be made upon satisfactory performance in a 3-hour acceptance test and several other tests witnessed by a regional board engineer. Results of such tests can then be made available to the manufacturer and purchaser of the apparatus.

Field checks of apparatus which has been listed may also be conducted by regional engineers who have power to remove listing numbers wherever violation of the specifications may occur.

WHEN applying for listing of any model, manufacturers must submit the following data to the Dominion Board's Fire Protection Engineering Department: The Board's "Form A," with complete information on the assembly; a brake horsepower curve of the stock production of the engine;* certified performance curves to show pump discharge and pressure and corresponding pump speeds under test conditions with a single 20-ft. suction line and a 10-ft. lift; and a certified copy of the results of the manufacturer's 4-hour factory rating and run-in test showing performance at all ratings.

The listing service involves the 12-hour endurance test procedure similar to that of the National Board of Fire Underwriters in the United States, but this may be eliminated upon satisfactory proof that the apparatus model has been subjected to such testing. The 12-hour tests are made in the following classifications:

Class A — Rated capacity of 150 psi net pressure for 6 hours; 70 percent of rated capacity at 200 psi net pressure for 3 hours; and 50 percent of rated capacity at 250 psi net pressure for 3 hours.

*Ed. Note: It has been found that production engines may deliver less power than custom-built models on which manufacturers' power ratings may be based

DOMINION BOARD OF INSURANCE UNDERWRITERS

460 ST. JOHN STREET, MONTREAL 1, QUE.

FIRE PROTECTION ENGINEERING DEPARTMENT

MANUFACTURER'S PUMPER DATA

Type of Apparatus to be Tested ... Class

Manufacturer's Model ... Manufacturer's No.

Engine: Make ... Type or Model ... Engine No.

Size: No. Cylinders ... Bore ... Stroke ... Comp. Ratio

Peak of ... Brake H.P. developed without accessories at ... R.P.M.

Ignition: Type ... Spark Plugs per cylinder

Dual Features:

Battery: Number ... Capacity ... Amperes Hours ... Volts

Carburetor: Make ... Model ... Type:

Fuel: Gasoline Tank: Capacity ... Location

Height above carburetor float ... Type of Feed

Anti-Siphon Device ... Fuel Octane: Recommended

Used on Test: ... Throttle Lever Control: Location

Type ... Rigid?

Cooling System: Heat Exchanger? ... Connection to Radiator?

Transmission: Gear Ratios: Overdrive ... High ... Third

Second ... First ... Reverse

Drive to Pump Through Transmission? ... Gear at Capacity

At 200 p.s.i. ... At 250 p.s.i. ... Special Clutch?

Locking Device on Transmission Gear Shift: Type ... Rigid?

Pumping Condition Marked: On Pump Lever?

On Transmission shift lever? ... For Priming?

Locking device on Pump Shift: Type: ... Rigid?

Gear Ratios: Engine to Impeller or Piston Drive Shaft: Capacity

At 200 p.s.i. ... At 250 p.s.i.

Pump: Make ... Model

Pump No. ... Capacity ... g.p.m. at ... p.s.i.

Type ... Theoretical Displacement ... g.p.

Pressure Control: Relief Valve: Type

Speed Control: Type

(See Over)

"Form A" of the Dominion Board of Insurance Underwriters. Manufacturer must supply this and other data in order to secure listing for his product.

DOMINION BOARD OF INSURANCE UNDERWRITERS

460 ST. JOHN STREET, MONTREAL 1, QUE.

FIRE PROTECTION ENGINEERING DEPARTMENT

PUMPER TEST RESULTS

MANUFACTURER

FOR CITY OF ... DATE

CONDUCTED BY ... ASSOCIATION

Type of Apparatus ... Class

Manufacturer's Model ... No.

Engine: Make and Type ... No. Cyl.

Size Cyl. ... Compression Ratio:

Peak Speed ... H.P. (Brake) Net

Pump: Make ... Kind

Gear Ratio: Engine to Pump: Capacity ... Pressure

Rating ... g.p.m. at ... pounds net pressure

" " ... pounds net pressure

" " ... pounds net pressure

Tested at ... Lift: ... Feet

FIRST TEST: Duration

Layout of Hose and Nozzles

Average Discharge and Pressure: ... g.p.m. at ... pounds net pressure. Speed, R.P.M., Engine:

Pump: ... Gear Ratio Used: ... Displacement:

SECOND TEST: Duration

Layout of Hose and Nozzles

Average Discharge and Pressure: ... g.p.m. at ... pounds net pressure. Speed, R.P.M., Engine:

Pump: ... Gear Ratio Used: ... Displacement:

THIRD TEST: Duration

Layout of Hose and Nozzles

Average Discharge and Pressure: ... g.p.m. at ... pounds net pressure. Speed, R.P.M., Engine:

Pump: ... Gear Ratio Used: ... Displacement:

(See over)

Another form used to record test results on pumpers submitted for listing. Reverse side of this sheet is for recording overload and road tests.

Class B — Rated capacity at 120 psi net pressure for 6 hours; 50 percent of rated capacity at 200 psi net pressure for 3 hours; and 33⅓ percent of rated capacity at 250 psi net pressure for 3 hours.

Where a manufacturer desires a pumping engine to be listed in both classes, and Class B engine speeds in each corresponding pressure rating do not exceed those for Class A, the following single 12-hour test is used: Rated capacity — 5½ hours at 150 psi; ½ hour at 120 psi. At 70 percent of rated capacity — 2½ hours at 200 psi. At 50 percent of rated capacity — ½ hour at 200 psi, 2½ hours at 250 psi. At 33⅓ percent of rated capacity — ½ hour at 250 psi.

Tests are also conducted for pressure governor operation, primer and pump vacuum, and for a short overload or spurt test to 10 percent in excess of the rated capacity of the pump.

All pumping tests are conducted on units which are completely equipped with engine and pump accessories, including all of those which consume engine power. The 12-hour, 4-hour and other listing tests are conducted at the manufacturer's factory and at his expense.

Tests are conducted only for pumpers rated for the following capacities (Imperial gallons): 420, 500, 625, 840, 1050, and 1250 gpm. (These would be comparable in size to U. S. pumpers of 500, 600, 750, 1000, 1250, and 1500 gpm capacity.)

Road testing is done with the apparatus fully loaded and having a full complement of men, or an equivalent weight which is estimated at 1,000 pounds. Since CSA Specifications require that fire apparatus be capable of attaining a speed of 35 mph within 30 seconds from a standing start, using regular gears, a simple road performance test is used. Apparatus is subjected to two test runs in opposite directions over the same test course to allow for any imperceptible factor of grade or wind condition. A stop watch is considered accurate enough to check acceleration in the required elapsed time. The apparatus must also attain a road speed of not less than 48 mph.

Already the new listing procedure is producing evidence that chassis and tires of fire apparatus are frequently overloaded, and that some units have little or no reserve of power over their rated performance.

Reputable manufacturers are supporting the new listing service as protection to themselves and to the purchasing municipalities. The insurance underwriters' associations of Canada expect to change their approval requirements for pumpers to specify Dominion Board listing by January 1, 1954. In the meantime, apparatus manufacturers are making the necessary design modifications to obtain such listings.

Test of primer vacuum and tightness of pump and suction hose, using a large scale vacuum gage on a capped 20-ft. suction hose.

How Williamsburg, Virginia, "Restored" its Fire Department

THE responsibility of providing fire protection for more than one hundred million dollars worth of property at Williamsburg, Virginia, falls on its volunteer fire department. Williamsburg, in addition to being a normal town with schools, homes, and stores for a population of 7,000, contains the Williamsburg Restoration buildings on which an estimated fifty million dollars have been spent. Added to this, the community's fire department lends protection for two large state hospitals, for William and Mary College, and for hotel and guest houses that can accommodate 2,000 visitors nightly. The problem is complicated further by the combustible nature of the candlelit, re-modeled original Restoration structures and the often irreplaceable antiques used to furnish them.

These responsibilities of the fire department had been growing at a rapid rate since about 1930, while the volunteer organization, lacking direction, attempted to cope with them. Finally, in 1950 the municipal government, working with Restoration executives, appraised the ability of the fire department to handle the tasks assigned it.

Careful consideration resulted in the decision to rebuild the department and the search for a qualified fire-fighting expert to head up the program began. Williamsburg found its man in Elliot W. Jayne, then Fire Chief at Lockheed Aircraft's Long Island plant and a New York State Fire Instructor teaching in Suffolk County.

The new Fire Marshal tackled the job with a seven-sided, five-year program. The seven elements of his plan were: revamp both paid and volunteer personnel, establish thorough fire-fighting training, procure adequate equipment, launch a public relations program to restore townsfolk's confidence in the department, promote fire prevention, improve water availability in certain parts of the town, and revise the town's building codes. While the task of fire safety never ends, the first five objectives have been completed and two and one-half years remain to accomplish the other two.

Fire Marshal Jayne (front center), his paid assistants, and the department mascot shown in front of the Williamsburg Fire Department headquarters. In addition to the apparatus shown here, the department also has a pick-up truck and a modern ambulance with a trained first aid crew.

Personnel

WHEN Fire Marshal Jayne took over, he was forced to dismiss certain paid employees in the department who were replaced. He now has one part-time and three full-time, salaried men. Then came the job of recruiting volunteers who would accept long hours of training, were dependable, and who were normally available in the immediate Williamsburg area. In several months he enlisted the approximately forty men required.

Classes in fire fighting were organized and are held every Monday night at the fire house. In addition, special drills and demonstrations are scheduled periodically during daylight. These drills and classes have an average attendance of 75 per cent.

Procuring Equipment

THE first purchases by the revitalized department included wearing apparel for the fire fighters, fog nozzles, dry chemical portable extinguishers for the trucks, rescue breathing apparatus, and two-way radios. At the same time the department's Mack 750 gpm pumper and the Ford 500 gpm pumper were re-equipped.

Fire Marshal Jayne's next desire was for the department to have a trained crew, with its own vehicle, devoted exclusively to salvage.

The fire department budget, already strained, could not provide the funds for the truck or its equipment. Determined to acquire a suitable vehicle, Fire Marshal Jayne organized a weekly wastepaper drive.

In six months, sales of the waste paper provided enough money to purchase a new Ford truck equipped with ladders, portable extinguishers, tarpaulins, sawdust, tar paper, gas masks, vacuum cleaners, mops and the like.

A similar determination resulted in the department's purchasing a new Pontiac ambulance to replace a battered, windowless 1936 La Salle hearse previously used for emergency ambulance work.

Members of the Williamsburg Fire Department conducting ladder drills at the Governor's Palace. The aerial ladder was obtained from the New Haven, Connecticut, Fire Department, for a few hundred dollars. A garbage truck was converted and reconditioned to provide the tractor for pulling the aerial. The entire assembly was then subjected to tests to assure proper performance.

(*Please turn to page 20*)

Don't Miss the NFPA Regional Meeting!

Providence, Rhode Island, October 29-30

FIRE department members of New England and other nearby states are urged to attend the NFPA Regional Meeting in Providence, Rhode Island, October 29–30. Many NFPA members and friends have already made arrangements to attend this two-day meeting which will be held in the Sheraton-Biltmore Hotel. Registration fee is only $2.00, but firemen in uniform will be admitted without charge. You do not have to be an NFPA member in order to attend this meeting. Every fire fighter will be welcomed.

The meeting is sponsored by a representative committee under the chairmanship of George F. Bliven, a member of the firm of Brown, Lisle & Marshall and Chairman of the Fire Prevention Committee of the Providence Chamber of Commerce. Chief Lewis A. Marshall of the Providence Fire Department is serving as Co-Chairman and Franklin S. Eggleston of the Chamber of Commerce as Secretary.

The program will feature a number of speakers who will discuss topics of particular interest to fire fighters. On Thursday morning NFPA General Manager Percy Bugbee will speak on the means of coping with the overall problem of fire waste. Chief Henry G. Thomas, of the Hartford, Connecticut, Fire Department, (Chairman, NFPA Committee on Fire Department Equipment) will discuss methods of obtaining effective municipal fire protection.

Immediately following this address will be a report by Chester I. Babcock, Manager, NFPA Fire Records Department, on the recent fire in the General Motors plant in Livonia, Michigan, together with a discussion of lessons of other fires.

DURING a luncheon sponsored by the Providence Chamber of Commerce on Thursday, Horatio Bond, NFPA Chief Engineer, and Kyle P. Laughlin, Director, Fire Services Division, Federal Civil Defense Administration, will discuss fire problems of the atomic age.

An address of prime importance will open the afternoon session when Henry Parkman, Assistant Director of the Office of Defense Mobilization, speaks on "Non-Military Problems of National Defense." The session will also feature an address on farm fire fighting by Howard S. Russell, member of the NFPA Committee on Farm Fire Protection, and Manager, Mutual Farm Underwriters. Warren Y. Kimball, Editor of FIREMEN, and Manager, NFPA Fire Services Department, will discuss new trends in fire fighting equipment.

Closing the Thursday session will be a panel discussion of hazards of oil-fired heating and cooking equipment. Participants will include Edward N. Montgomery, Deputy Chief in Charge, Fire Prevention Division, Boston, Massachusetts, Fire Department; Miles E. Woodworth, NFPA Flammable Liquids Engineer; and J. H. Witte of Underwriters' Laboratories, Chicago, Illinois.

THE all-day session on Friday will begin with a discussion of fire protection standards by Robert S. Moulton, NFPA Technical Secretary. Methods of coping with forest fires will be discussed by Arthur S. Hopkins, Executive Secretary, Northeastern Forest Fire Protection Committee. I. "Sam" Black of U. S. Rubber Corporation and Stanley F. Spence, of American Cyanamid Company, will speak on effective industrial fire control programs.

Friday afternoon will feature an address on water supplies for an air raid emergency. Speaker will be George W. Coffin, Consulting Engineer, Coffin and Richardson, Inc. Another important feature of this session will be a panel discussion of spray nozzles and spray sprinklers. Participants will include NFPA President A. L. Cobb, Safety Supervisor, Kodak Park Works, Eastman Kodak Company, Rochester, New York; E. W. Fowler, National Board of Fire Underwriters; N. J. Thompson, Factory Mutual Laboratories; and Eric Hanson of Grinnell Company, Incorporated.

Cleveland Sewer Explosion

(See Cover and page 7)

Two other scenes of areas affected by the sewer explosion in Cleveland, Ohio. Altogether 1.2 miles of street were damaged by the blast. Some automobiles were crushed under chunks of concrete. (See cover photo.) Manhole covers were sent flying through the air, several water mains were broken, and gas, electric, and communications installations underground were damaged. The only fire that resulted was in an automobile which was hit by debris. A short circuit in the wiring caused a small fire which was extinguished promptly by a hand extinguisher. (Photos by Cleveland Fire Prevention Bureau.)

"Make It Easy for the Engine"

By Battalion Chief Robert Ely, Master Mechanic, San Diego, California, Fire Department

During the 1951–1952 fiscal year the San Diego Fire Department, under Chief George E. Courser, answered 3,345 alarms, or an average of 123 alarms for each piece of fire apparatus. Only 45 percent of the alarms required pumper operation and the average time apparatus was in service was 30.8 minutes. In this article Battalion Chief Ely discusses some of the maintenance procedures used by his department to assure proper starting and operation of all apparatus for the rugged performance required by fire duty.

FIRE apparatus engines are subjected to conditions not encountered in any other type of automotive service, that is, they are started and operated under full load without any warmup period. They may answer a false alarm and return to the station in four minutes, or they may respond to a real fire and be required to pump large volumes of water for hours.

Because of such severe operating conditions some fire departments make it a practice to start engines at least once a day for "testing." In the San Diego Fire Department it used to be our custom to start the engines at 8:00 A.M. each morning, and also whenever a signal started to come in over the alarm circuit. It was known that at least three pieces of equipment would respond to the alarm. If all were started at once, by the time two rounds of the coded location were read the engines would have had a few more seconds of "warm-up" before leaving the station. Appratus which did not respond was allowed to run for five minutes and was then shut off.

While our department followed this procedure our engine oil pans were producing one to two inches of sludge. We attempted to eliminate this by running the engines for at least ten to fifteen minutes each time they were started. This made the condition worse, since it increased water condensation within the engine and this was mixing with the oil. We then tried to find out how long a fire engine would have to operate before this condensation ceased. (I discussed this with master mechanics of other fire departments and oil company engineers and received estimates ranging from five to thirty minutes.)

Such information was obtainable for automobile engines not used in the fire service, but I did not find anyone who had made scientific tests, with recorded results, on large fire apparatus engines. Oil company engineers did tell us that crankcase oil had to reach 143° F. before the engines would stop "sweating," so we secured temperature recorders and proceeded to make tests on our 6- and 12-cylinder fire engines.

The first engine tested did not have water temperature thermostats. We found that when running the engine in the station at 750 rpm without a load it required one hour and fifty-five minutes to get the oil temperature up to 143° F. A second test was run under the same conditions, except that the radiator was blanketed to stop the air circulation and fifty minutes were required to bring the oil temperature to 143° F.

The next apparatus tested had water temperature thermostats and it took one hour and 25 minutes to get the oil temperature up to 143° F., while running the engine at 750 rpm.

The third apparatus tested had water temperature thermostats and an oil temperature regulator. It took 40 minutes to get the oil temperature up to 143° F.

This bearing was found in one of the San Diego engines after the main bearing bolts had sheared. Chief Ely states that the department now changes oil in all apparatus every four months, regardless of the oil condition. He also states that proper operation and maintenance can minimize "sludge," but that about a year of such maintenance is necessary to properly clean an engine which has been subjected to such accumulation.

After making these tests, we concluded that such engines should not be started except to answer an alarm or for training activities. When we put our conclusions into practice the sludge content of our engines cleared up several hundred percent.

We then secured the services of a laboratory and each month sent in for analysis samples of oil from our fire apparatus crankcases. Many mechanical defects were uncovered by the laboratory tests. It was discovered that unfiltered oil was bypassing the cartridge. Bearing metal was reported in one oil sample tested from a piece of apparatus that had been operated under severe conditions at a third alarm lumber yard fire. When we removed the oil pan from this engine, we found the center main bearing bolts broken, a condition which put a double load on the next bearing which had started to deteriorate.

AN ENGINE can be started every hour for 24 hours a day, but that does not prove that it will start when a fire alarm is received.

Good ignition and starter switches will operate satisfactorily many, many times, but who knows whether these units will fail at the very hour and day when the apparatus is needed?

If you depend entirely on the daily test method to see if the engine will start, the "life" of different units will be used up in the tests and the failure may occur at a crucial moment. It is much better to have a schedule of preventive maintenance and replace spark plugs, switches, batteries, wiring, fuel pumps, and other items before a failure occurs.

As part of our maintenance program we installed instruments on two of our pumping engines which recorded the oil temperatures which occurred during forty actual alarms. The weather temperatures varied between 38° F. and 88° F. during the tests and the maximum engine

oil temperature per alarm varied between 55° F. and 160° F. with an average oil temperature per alarm of 93.3° F. I have, at times, recorded oil temperatures of 230° F. and 250° F. when pumping at capacity.

I have mentioned these temperatures to show that a major part of the time fire equipment runs with very low oil temperatures, yet, when the same apparatus is pumping large volumes of water, the oil temperatures run high. I recommend an oil with a high viscosity index, which means that the oil has sufficient mobility or flow when cold to function as a lubricant and when hot still will retain enough viscosity or body to supply adequate lubrication.

The primary functions of a lubricating oil are: to eliminate metal to metal contact and reduce friction; to act as a heat transfer medium and coolant; and to act as a sealing agent.

Also, the modern oils that meet the Mil-0-2104 specification, through the addition of additives, help to prevent oil contaminants or deposit forming materials from interfering with engine operation; to prevent rusting of ferrous parts; and to prevent corrosive wear.

IF YOUR fire department is contemplating a preventive maintenance program, I would recommend the following procedures:

1. Call in an oil company's representative to take samples of the crankcase oil. There is a proper procedure in such sampling so that correct evaluations can be made. If the oil company does not have testing facilities, there are laboratories which will make the correct analysis. It is important to get a laboratory that is familiar with testing crankcase oil, and which will be able to advise you when the fuel dilution, solids, sludge, and other properties are normal or excessive, and to what degree.

2. If you are not using a heavy duty oil, ask your oil company to supply you with an oil meeting the Mil-O-2104 specification. A good oil is much cheaper than repairs. If you are considering replacing your present with a heavy duty oil, get your oil company's advice on proper procedure to follow to make the change.

I would strongly recommend that the motor be properly flushed with a good flushing oil and the oil pan be removed and thoroughly cleaned. Wash out the oil pump screens, and clean and wipe out the interior of the engine. Some engines in fire apparatus have been "sludged" over a period of years, due to the way they have been operated, and it should not be expected that the internal parts of the engine and oil passages will be cleaned "overnight."

It is necessary to have good compression, ignition, carburetion, a good oil and fuel, along with proper operation, to get the best results.

3. Do not start engines unless necessary to answer an alarm or to drill with the apparatus. The wear on a cold engine is many times that of a warm engine. Unnecessary starting means waste of gasoline and contamination of oil.

If your engineers or operators know their apparatus and it is properly maintained, with the battery fully charged and gasoline in the tank, an engine will start when needed, as we have proved in answering over 19,113 alarms, including 32,712 apparatus responses, with only one starting failure.

4. Include water temperature thermostats and oil temperature regulators or heat exchangers in all future apparatus specifications and install thermostats in old fire apparatus where possible.

5. The fire apparatus engineer or operator should be instructed in the proper use of the choke and the manifold heat control valve, and when shutting off the engine to "idle down" as slowly as possible until the excess gasoline in the intake manifold is used, and then shut off the ignition. When answering an alarm, as soon as the apparatus is shifted into high gear and has picked up sufficient speed, if the driver will take his foot off the throttle (accelerator) for about six seconds and let the rear wheels drive the engine, this will cause a high vacuum in the cylinders. The atmospheric pressure in the crankcase will force oil on the cylinders up by the pistons and rings, lubricating them well and making a good compression seal. The driver can then step on the throttle and continue to the destination with the engine better prepared to overcome the cold start and full power loads.

6. Follow a definite program of proper preventive maintenance, proper lubrication, inspections, tests, adjustments and replacements.

7. Use the proper procedure for changing oil and oil filters. Following is a copy of our Bulletin No. 139, which outlines such a procedure in the San Diego Fire Department:

BULLETIN

Samples are being taken of the fire apparatus crankcase oil and it is being tested in a laboratory to determine the condition.

When the reports of the oil tests are received, the Master Mechanic shall call the stations that should change oil or oil filters and notify them to do so.

The procedure to change oil shall be as follows: Before starting engine,

1. Drain oil filter sump only and then install plug.
2. Start engine and warm up to operating temperature.
3. Stop engine. Remove oil filter drain plug and all crankcase drain plugs.
4. When all oil is drained, install crankcase plugs only.
5. Put in proper amount of new oil.
6. Leave drain pan under oil filter drain and turn over engine with starter until clean oil runs out.
7. Install oil filter drain plug and add oil as necessary.
8. Start engine and check for oil leaks. Do not overtighten oil drain plugs.

When a new oil filter element is to be installed with an oil change, proceed the same as above and add to step 3, "Remove old oil filter element and clean out oil filter body." Add to step 7, "Install new oil filter element or elements."

Each month on hose change day, before the engine has been started, the oil filter sump shall be drained and oil added as necessary.

It is possible on one run or pumping job to dilute or contaminate the oil enough to make it unfit for further use by overchoking, by a stuck carburetor float valve, water leaking into crankcase, dusty roads, etc. A close check shall be kept on the motor oil and at any time it appears that the oil should be changed, the Repair Shop shall be notified.

In no event shall the motor oil be run more than four months. A strict record of oil changes shall be kept and signed by the Engineer showing the date, the apparatus road miles and engine miles, the make, kind and S.A.E. number of the oil used, and the make of oil filter element installed.

Definition and Classification of *Fire Casualty Statistics*

NFPA Standard No. 3, adopted during the 1953 Annual Meeting, provides some basic definitions which fire chiefs and fire departments can apply usefully in recording fire casualties in their communities. The Standard is reprinted in its entirety on these pages. Pocket size copies may be obtained from the NFPA Executive Office for twenty-five cents each.

THE absence of accurate and detailed statistics on fire casualties has hindered attempts by educational and other means to reduce the number of deaths and injuries from fire. To those engaged in fire protection and fire fighting it may seem strange that one of the chief obstacles to the collection of such data has been the lack of general agreement as to just what constitutes a fire casualty.

Following its establishment in 1949, therefore, the NFPA Committee on Fire Casualty Statistics undertook as its first project the development of a universally acceptable Definition of a Fire Casualty. The Definition was tentatively adopted in 1951 and after a year's trial by a limited number of states, provinces and cities, was finally adopted in revised form in 1953.

As a further aid in the compilation of comparable statistics the Committee prepared a Location Classification of Fires responsible for Fire Casualties. The Location Classification was finally adopted in 1953.

A form for reporting fire casualties has also been drawn up by the Committee. Sample copies may be obtained without charge from Committee Secretary Chester I. Babcock, Manager, NFPA Fire Record Department, 60 Batterymarch Street, Boston 10, Massachusetts.

Definition of Fire Casualty

A fire casualty is an injury or death resulting from a fire. Fire casualties are classified as primary or secondary. Primary fire casualties include those where injuries or deaths are a direct result of fire. Secondary fire casualties include those injuries or deaths in which fire is involved but some other cause is assigned as primarily responsible (see below).

Fire Injury. A fire injury is one suffered as the result of a fire or explosion that receives (or should receive) treatment by a practitioner of medicine within one year of the fire or explosion (regardless of whether treatment was actually received).

Fire Death. A fire death is a fire injury which becomes fatal within one year after the fire.

More than One Cause of Death. Where a death may be due to more than one cause, one of which is a fire cause, the underlying cause as determined by the attending physician shall govern.

Fire, for the purposes of this definition, includes all occurrences customarily considered as fires, including explosions of combustible dusts, flammable vapors or gases.

Primary Fire Casualties. Besides bodily burns suffered directly as the result of fire, or while attempting to extinguish a fire, the following are included as primary fire casualties:

1. Casualties suffered while attempting to escape from buildings or other enclosures on fire or in danger of taking fire. This includes injuries suffered as the result of fire panic, provided fire actually exists.

2. Casualties suffered by firemen or others due to falling walls, beams, wires, etc., which fall as the result of fire or explosion (salvaging or wrecking operations excluded).

3. Inhalation of smoke or hot or poisonous gases during a fire.

4. Contact with an object or material that was heated or released by a fire (such material may be in solid, liquid, or gaseous form).

Secondary Fire Casualties. Casualties which are indirectly associated with fire are classified as secondary fire casualties. In tabulations of fire casualties, secondary casualties are to be segregated from primary casualties.

Secondary fire casualties include the following:

1. Disease contracted due to exposure to weather in time of fire.

2. Injuries due to fire breaking out in vehicles following accidental impact where fire is the result of accidental impact.

3. Over-exertion while escaping from or fighting fire.

4. Injuries to firemen or other officials while responding to or returning from a fire.

5. Murder or suicide by means of fire.

Exclusions. For the purposes of fire casualty statistics certain casualties are excluded:

1. Lightning or electric discharge is not considered as fire except where it causes fire or occurs in connection with fire in which case casualties due to fire are classified as fire casualties.

2. Explosions of steam boilers, hot water tanks and similar containers due to internal pressure are not classified as fires, but if they result from accidental fire, casualties associated therewith are classified as fire casualties; or if the contents of the container is a flammable material which burns upon release and thus causes fire, injuries caused by the resulting fire are classified as fire casualties.

3. An explosion of ammunition or other detonating explosive is not included as a fire, except that where such an explosion is due to a fire, casualties resulting therefrom are classified as fire casualties, or where such an explosion causes a fire any casualties occurring in the subsequent fire are classified as fire casualties.

Location Classification of Fires Responsible for Fire Casualties

Fire casualties may be classified according to the location of the fire causing the casualty. The items in the Location Classification below are arranged in an order of preference. When a single fire involves more than one item the fire takes the classification of the item highest in the order of preference. A fire in a shed, garage or other small outbuilding on the premises of a major building takes the classification of the major building.

1. Outside areas
   (a) Forest or wooded
   (b) Prairies or grass lands
   (c) Places of outdoor assembly
   (d) Other open space
2. Buildings
   (a) Residential
      1. Dwellings of one and two family occupancy, except farm dwellings (including private garages)
      2. Stationary trailers occupied as living quarters
      3. Farm dwellings
      4. Multifamily dwellings (more than two families)
      5. Hotels
      6. Dormitories, fraternity and sorority houses
      7. Lodging and rooming houses
   (b) Institutional
      1. Hospitals, sanatoriums, orphanages and similar occupancies where movement of occupants is restricted because of age or disability
      2. Prisons, insane asylums and similar occupancies where inmates are under restraint or detention
   (c) Public assembly (*e.g.*, theatres, night clubs, auditoriums, bowling alleys, churches, dance halls, schools)
   (d) Mercantile (grocery store, department store, etc.)
   (e) Manufacturing (metalwork, woodwork, etc.)
   (f) Miscellaneous other buildings (*e.g.*, city halls, commercial garages, hangars, libraries, offices, piers, warehouses)
   (g) Farm except farm dwellings
3. Transportation (if vehicle is in a building, class as building fire)
   (a) Aircraft
   (b) Motor vehicles, private (stationary trailers occupied as living quarters — class as Residential)
   (c) Motor vehicles, public
   (d) Railroad trains
   (e) Streetcars
   (f) Marine vessels
   (g) Other
4. Subsurface
   (a) Mines or quarries
   (b) Tunnels
   (c) Other
5. Confined to clothing worn by persons involved
   (a) Indoors
   (b) Out-of-doors
6. Miscellaneous other places and not specified

Further subdivision under each item may be made if desired.

For a complete list of NFPA Standards
write to:
NFPA Publications Department
60 Batterymarch Street, Boston 10, Massachusetts

Manual for Training Fire Fighters

THE Ohio State Division of Vocational Education has published a "Fire Service Training Manual" designed to aid in the training of both paid and volunteer fire fighters. The illustrated, 246-page, 8½ x 11 in. volume is used as a basic text for the statewide 30-hour fire service training course given by the Trade and Industrial Education Service of the Ohio State Department of Education. Contents of the new manual cover legal aspects of fire protection in Ohio, community fire defense, use of equipment, hydraulics, and other subjects important to efficient fire fighting operations.

Single copy price of the paper bound edition is $1.88, while the cloth bound edition costs $3.44 per copy. Slight additional charges are made for postage and handling.

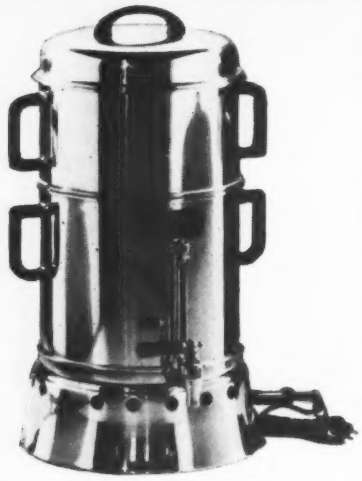
Copies of the new manual, or further information, may be obtained by writing to: The Instructional Materials Laboratory, 200 Communications Laboratory, Ohio State University, Columbus 10, Ohio.

●

New Seagraves at Lansing, Michigan

A 1000 gpm Seagrave pumper supplying ladder pipe at top of a new 85-ft. steel "service type" aerial ladder delivered to Lansing, Michigan, by the Seagrave Corp. of Columbus, Ohio. This ladder truck has a 4-stage auxiliary high pressure pump and two high pressure hose reels. Lansing has also placed an order for a 1000 gpm Seagrave pumper incorporating the high pressure pump. This will be the twenty-fifth Seagrave in the department that has never used any other brand of apparatus.

THE JEWEL TEA CO., INC.
will GIVE this
48 CUP
DRIP-O-LATOR
to Your
FIRE STATION KITCHEN!



This GIFT is Yours just for Introducing Velvetouch Cream Shampoo to your friends and neighbors!

Just think—for selling 65 jars of wonderful Velvetouch Cream Shampoo at $1.00 per jar—this $32.50 Electric Drip-O-Lator Coffee Maker will be given to your station absolutely Free. No filter papers, no cloths or bags are needed. This beautiful urn with the patented no-drip spigot, glass coffee gauge, and 2-way switch for keeping coffee hot for hours—makes 24, 36 or 48 cups of delicious coffee.

Over 2,000,000 Jars of Velvetouch Cream Shampoo Sold Each Year by Friendly Jewel Men

Here's a cream shampoo all the family will enjoy. Leaves the hair "squeeky clean" and wonderfully easy to manage.

Enthusiastic Report From Dixon Fire Department

Chief Gale Keyser of Dixon, Illinois says: "The people who bought our 65 jars of Jewel Shampoo are really satisfied—and we sure enjoy the fine coffee and convenience of our electric coffee urn."

Dept. F

JEWEL TEA CO., Inc., Barrington, Ill.
Serving More Than a Million American Homes

The Bushnell Story

By J. B. Meloan, Trustee, Bushnell, Illinois, Fire Protection District

THE Bushnell Fire Department found itself in rather poor condition by 1952. Due to increased cost of operation and decreasing revenue, what had been one of the best departments for its size in Central Illinois was without proper equipment and housing. As a result the firemen were losing interest and pride in their department. It was not feasible for the city to supply more funds from taxation and the money raised by the fire department wouldn't meet the increased cost of equipment and other essential items.

A series of costly fires and the resultant demand of people of the surrounding rural area for better protection brought new developments early in 1952. With the support of the local Junior Chamber of Commerce, the people voted to establish a Fire Protection District, as provided by Illinois law. This district included the city of Bushnell (population 3500), and sixty square miles of the surrounding rural area. The district has a valuation of approximately $16,500,000 and thus at a tax rate of 1.25 mills, will bring a revenue of about $20,500 per year.

The County Court appointed a board of three trustees in May 1952. This board immediately passed the necessary ordinances to create a new fire department, built around the old Bushnell City Fire Department, which had been organized since 1883.

In this manner the new Fire Protection District acquired a 500 gpm rotary pumper on a 1939 International chassis, a 300 gpm rotary pumper on a 1926 Reo chassis, and a 1898 fifth wheel ladder wagon pulled by a 1940 Chevrolet truck. There was also a portable pump which had recently been purchased by Bushnell City firemen from their own funds.

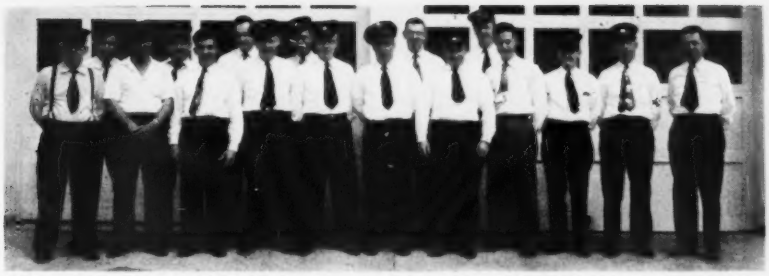
Since housing was completely inadequate, a suitable lot was purchased and the District contracted for the building of a fire station. The accepted bid was $19,850. Plans included provision for a future addition to contain a permanent meeting room, kitchen, showers, additional toilets and possibly a dormitory. A temporary kitchen has been installed for present operations. The front portion of the building is 62 x 35 ft. and the ell is 24 x 30 ft. (used at present for meeting room, kitchen, etc.).

The department now has four pieces of equipment but six trucks could be housed in the new station. It is felt that if more than five pieces of equipment are needed, the additional pieces should be housed in other portions of the district.

A new truck designed primarily for rural fire fighting was also purchased. It was built on a F-8 Ford chassis, has a 500 gpm, 3-stage centrifugal pump, an 800 gallon booster tank; two 200-ft. reels of high pressure hose; two pre-connected 1½ lines of 200 feet each; 1,000 feet of 2½-in. hose; a portable pump; two Scott Air Packs (making a total of four); and other necessary equipment. Operation of the truck and pump is controlled from the operator's panel. The rig was constructed by the Fire Fighter Truck Company of Rock Island, Illinois, for approximately $11,000.

Bushnell Fire Chief Ed Stoller, an expert welder, built a new service truck using the 1940 Chevrolet

New fire station of the Bushnell Fire Protection District. Ell at right rear at present is used for meeting room and kitchen. The building can be enlarged in the left rear section to make new quarters for personnel or apparatus.



Present personnel of the Bushnell Fire Protection District. Chief Ed Stoller is in the rear row, second from left.

chassis. This truck carries a 45-ft. 3-section aluminum ladder; a 30 ft. 2-section wooden ladder and a 16-ft. wooden roof ladder.

The personnel of the department consists of 20 call men. The Chief and clerk receive a salary of $100.00 per year, while all other firemen are paid $4.00 per call for city fires and $5.00 per call for rural fires. Alternate groups of ten men respond to country calls each month. Fire fighters also receive $2.00 per drill for twelve drills per year and $1.00 per week for detail work.

AS REQUIRED by the Illinois Inspection Bureau, each farm within the District has been visited, numbered and a card completed which shows the best route to the farm, location of building, available water, and other important data.

We believe our numbering system, which was designed by our attorney, T. Otis Brown, is unique and very practical. The District is divided into four sections. A four digit number system is used with the 1000 series North and West of Bushnell, the 2000 series North and East of Bushnell, the 3000 series South and West of Bushnell and the 4000 series South and East of Bushnell.

The first digit indicates the section of the District, the second digit shows the number of miles north or south of the dividing line to where the farm is located, the third digit shows the number of miles east or west of the dividing line and the last digit is the number of the farm within the mile. It can readily be seen that with this system we can go to a fire with no information other than the number. As added checks we have used a different colored card for each section. Also the odd numbers (1000 and 3000 series) are West of the town, the even numbers (2000 and 4000 series) are East of town, the smaller numbers (1000 and 2000) are North and the large (3000 and 4000) are South.

Number plate which is posed in front of each farm property. The District also has prepared inspection cards which will allow fire fighters to make systematic inspections of rural properties.

We are encouraging all farmers to give fire alarms by number but as an added check we have a cross index system showing the name of the owner and/or tenant and these cards give the number so that the other card can be found.

Each farm has been supplied with a metal plate of red numbers on a white background (see photograph), which is placed along the road in front of the farm. A sticker provided for each telephone shows the number of the farm and gives instructions for turning in an alarm.

To familiarize the public with this number system we have had maps of the district produced in quantity and have made them available to physicians and business people of the community so that they might use our numbering system in locating their rural customers and patients. It is our hope that the local telephone company will publish these numbers in their next directory.

Our future plans call for the addition of a 1000 gallon tanker and two-way radio. These will be added as soon as our finances permit.

The Illinois Inspection Bureau has just completed inspection of our district and granted us a Class A rating. Farm owners can now receive the best insurance rate granted by the Bureau.

Jewel HOME SHOPPING SERVICE

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48 CUP DRIP-O-LATOR

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The "CLIFTON" No. 900

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The CAIRNS line also includes other helmets in drop-brim and other styles — in leather, aluminum and "Flint-Flex," and in other weights — all of standard CAIRNS QUALITY. We can supply everything the fireman needs for his personal equipment. Write for Catalog 340.

CAIRNS & BRO., Inc. - Allwood, Clifton, N. J.

SINCE 1836

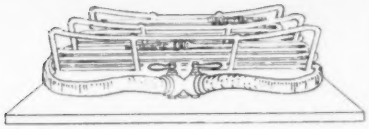
Donut Load for 1½-in. Hose

THE Denver, Colorado, Fire Department, under Chief Allie A. Feldman (see FIREMEN for September, 1953), has developed a donut hose load for 1½-in. hose compartments. This load permits 200 ft. of 1½-in. hose to play out freely without effort, as contrasted with the struggle that is often experienced by fire fighters when this size hose is loaded in narrow compartments in conventional fashion.

Each Denver pumper has two compartments for 1½-in. hose. These lines are connected to special pump outlets at the head of the hose body and the lines are supplied by booster tanks until a hydrant supply line can be placed in service. Experience has shown that most fires in residential districts can be controlled by the two 1½-in. lines from the first due pumper. In some residential areas time has been saved by having the first due pumper go directly to the fire and having the second due engine lay the supply or back up line.

In general, Denver makes no use of booster hose, preferring the more adequate 1½-in. lines from the tank. However, the apparatus does carry preconnected a 50-ft. coil of ¾-in. garden hose for use on trivial outside fires where the larger capacity 1½-in. hose is not needed.

This photo shows one of the donut hose loads for 1½-in. hose on Denver's Engine 23. Note at lower right that a small hinged bar or strap keeps the load secure when the apparatus is on the road. The divided hose body with 600 ft. in each 2½-in. hose compartment, is also arranged so that two 2½-in. lines can be laid simultaneously.



The accompanying diagram from the Denver Training Manual, furnished by Assistant Chief John Horan, Department Training Officer, shows how the load is made. In use, one man takes the donut with the playpipe attached and the other donuts lay themselves out in line, free of kinks. A second man can advance additional donuts as desired.

Membership Report

NFPA welcomes: The following fire chiefs and fire departments who have joined the Association, bringing NFPA Fire Department Membership to 2,114 fire departments and 25,554 men.

Arizona: Safford Fire Department, Safford.

California: Big Pine County Fire Protection District, Big Pine; Westminster Volunteer Fire Department, Westminster.

Florida: Jacksonville Fire Department, Jacksonville; Marathon Volunteer Fire Department, Marathon.

Illinois: Chief Charles B. Gailliaert, Colona Community Fire Department, Colona.

Iowa: Chief L. P. McFadden, Manchester Fire Department, Manchester.

Missouri: Gray Summit Volunteer Fire Department, Gray Summit; Chief Leo Jackson, Liberty Fire Department, Liberty.

New Jersey: Demarest Volunteer Fire Department, Demarest.

New York: Conklin Volunteer Fire Department, Binghamton.

Ontario: Chief R. Armstrong, Sarnia Fire Department, Sarnia.

Quebec: Huntingdon Volunteer Fire Brigade, Huntingdon.

Utah: South Salt Lake City Volunteer Fire Department, South Salt Lake City.

Washington: King County Fire Protection District No. 2, Burien.

Wyoming: Evanston Fire Department, Evanston.

NFPA Quarterly Preprint!

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Had we but world enough and time

no one would need monitors but speed in communication is economy and often a life and death matter.

MODEL PR9 FOR 152-174 MC BAND

Chief McMurtry and members of Sheridan, Indiana, Volunteer Fire Department with John Oakley Vice-President of Midwest Fire and Safety Equipment Co. who supervised monitoradio installation.

If you have a police, fire, forestry, pipeline, civil defense, taxi or any other vital 2-way radio system, here is how monitors pay off.

Says Chief McMurtry—of the Sheridan, Indiana, Volunteer Fire Department:

"In the past, the largest obstacles for our Volunteer Fire Department to overcome has been the method of determining the exact location of the fire and beating the traffic there. Speed of course is essential for the efficient operation of any Fire Department. Now, with the Town Police Radio Base Station located in the Department and with the use of 18 PR9 Receivers in the homes of our members we not only learn of the fire before the Town Siren is blown, but we in many cases arrive at the fire before the equipment.... *We do not hesitate to recommend this Receiver to any Department.*"

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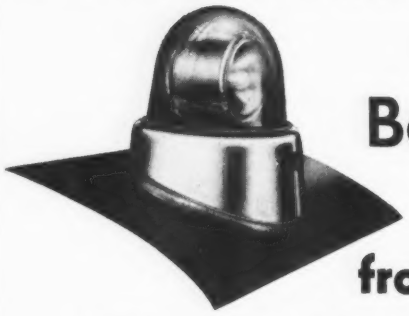

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Every crossroads is a crisis when you misplace your faith in *one-angle* warning lights! Equip your apparatus with the *one* emergency light that commands caution from *every angle* . . . the FEDERAL BEACON-RAY LIGHT.
Two Powerful sealed-beam lamps, mounted back-to-back, rapidly rotate for complete 360° protection on the way, or standing still at the scene of a fire. As more and more fire departments specify BEACON-RAY, this sweeping flash of intense light is becoming THE symbol of fire fighters on the way . . . automatic clearance of right-of-way from *all angles!*

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8717 SOUTH STATE STREET CHICAGO 19, ILLINOIS

Williamsburg, Virginia Fire Department

(*Continued from page 10*)

Public Relations

MUCH of the success of Williamsburg's fire department reorganization can be attributed to the public relations activities initiated by Fire Marshal Jayne. He needed the active and sometimes financial support of the community to put over his program.

To accomplish this his day is one of constant patrol and activity. In the morning he may be counselling with a local druggist on fire hazards in his store and how to overcome them. Slightly later he might be rechecking the Capitol Building for hazardous situations which may have arisen since the previous day. At lunch he may be addressing a local business group followed at mid-afternoon by a lecture to interested children on home fire prevention at one of the town's three schools. At dinner time he could be at the Williamsburg Inn checking grease accumulations on the hotel's kitchen exhaust ducts. By 9 P.M. he'd be at a private reception at the Governor's Palace.

His work doesn't stop there however. His out-of-door drills for volunteer firemen frequently are scheduled for Saturdays and held in prominent locations. The crowds that collect to observe the drills attest to the interest of Williamsburgers in their fire department and the soundness of Jayne's psychology.

In a further attempt to foster home fire safety he arranged to have fire prevention circulars enclosed with the town's water bills. He reports that "the reaction was most gratifying." The number of people who contacted him for further information and aid exceeded his most hopeful expectations.

Extinguishing Equipment and Alarms in Buildings

THE Restoration buildings are well equipped with portable extinguishers for first aid fire fighting. The great majority of these units were installed as the buildings were completed and in sufficient numbers to cope with any reasonable incipient fires. The fire department has been instrumental, however, in having additional portables placed in significant buildings and in checking

the operation and recharging of all units as necessary.

The availability of water for fire fighting in this area of the town is held to be sufficient according to Restoration executives. The basic planning for the restored section of town provided an adequate network of water mains with properly located fire hydrants.

Built into the most important buildings are temperature-rate-of-rise fire detector elements which are concealed in moldings and are not visible to detract from the authentic effect. Recently a Kidde-Atmo fire detection device was installed in the Williamsburg fire station by Walter Kidde & Company, Inc. The system comprises a network of copper tubing mounted on the ceiling of the main floor and in the stairwell leading to the second floor. The two ends of the tubing terminate at a detector located in the same room containing other fire reporting devices.

An abnormal continued rise in temperature, such as fire produces, causes air within the tubing to expand and move in opposite directions to act on two opposing diaphragms in the detector. The pressure forces them together and closes an electric circuit which causes an alarm to sound.

Results of the Program

FIRE Marshal Jayne will probably never be satisfied with any record short of complete elimination of destructive fire in Williamsburg. It is interesting to note, however, that for 1951 and 1952, losses for the two-year period totalled only $2,500.

Even more important is the knowledge that if a severe fire strikes, Williamsburg's firemen and their efficient equipment stand ready to cope with the emergency.

Williamsburg volunteers using fog to extinguish oil spill fire in training session.

Don't get caught without plenty of

INDIAN FIRE PUMPS!

You're really "hooked" if you don't have enough of these famous, clear water extinguishers to take care of any fire emergency. Order Now! Don't wait until the fire season is here to stock up on INDIAN FIRE PUMPS.

"We have used INDIAN FIRE PUMPS for several years and need 12 more, which please ship at once. We cannot afford to be without the INDIAN for we consider it the handiest piece of fire fighting equipment on our truck."

F. H. Sanders, Mayor.

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Significant Farm Fires

By Howard S. Russell, Manager, Mutual Farm Underwriters, and member of NFPA Committee on Farm Fire Protection

At the request of the Editor, Mr. Russell, whose organization has investigated hundreds of farm fires, has agreed to report from time to time on significant farm fires in which fire fighting or fire prevention lessons are involved. Mr. Russell is Chairman of the Massachusetts committee on Fire Fighting in the Country and has been a leader in securing improved fire protection in rural areas. It is hoped that publication of such data on farm fires will encourage rural fire departments to send to FIREMEN *or the NFPA Fire Record Department interesting data about recent farm fires that they have been called upon to fight.*

"SHALLOW, small, inadequate waterhole within 750 feet." That was part of the written report made by an insurance inspector in July just two days before the barn caught fire. Thirty-eight cows were burned to death in this Massachusetts farm fire along with other valuable contents. The barn was a total loss. The cause may have been an overheated motor. The fire was discovered by the son who returned home to find the milkroom in flames. He had left the barn following the evening milking only an hour and a half before.

The fire apparatus of this New England town is adequate and responded quickly; yet they lost the building for lack of water. Water from the nearby town waterhole built years ago by the W.P.A. lasted only a brief time. They switched to the farm waterhole mentioned by the inspector. This lasted only twenty minutes, long enough to protect an exposed garage with a wooden shingle roof and the brick dwelling. The heat was so great that the vines on the walls of the dwelling were withered. Water gone, tank trucks had to bring more from a pond three-quarters of a mile away. By this time the barn was fully involved.

You just can't save a big farm building by makeshifts. A couple of hundred dollars spent on bulldozing either of the waterholes to adequate proportions beforehand probably would have enabled the local fire fighters to cut off the fire at the milkhouse.

There was another lesson to be learned. Only two cows were saved. The reason was that the doorway which the cows were in the habit of using led towards the fire. Though there were two other possible exits, they were unaccustomed to them. Cows are not heavily endowed with brains. Any barn which houses cattle should have at least two exits, and the cows should be taught to use both.

ONE of the most hopeful developments in fire fighting, at least in New England, is the rapidly increasing construction and use of artificial ponds and waterholes for fire fighting and other farm purposes in areas outside the hydrant protection. Most of these ponds are built with the engineering advice and cooperation of the Soil Confervation Service. Some are Constructed under

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town appropriations, some by individual farmers, some by groups of neighbors.

Important practical aspects of the planning and use of farm ponds for fire purposes are taught by the following quotation from the latest "Soil Auger," publication of the Massachusetts Agricultural Extension Service:

"Edward Bashista of Southampton is certainly glad that he constructed a pond three years ago. Recently, because of the pond, he was able to save his house, a garage and several other small buildings. Several thousand dollars in fire damage would have been saved if the fire apparatus had not become stuck trying to get to the pond. A suitable approach to the source of water is just as important as the water and is the thing most often neglected." (This pond was not built by Soil Conservation.)

The best plan is to construct a pond alongside a paved public road, if possible. If this is not feasible, construct a hard gravel road to the pond and plow it in winter. Or, pipe the water from the interior waterhole to a dry hydrant or to a secondary pool beside the road. To make a draught pipe properly, water should be at least six feet deep at the point where the fire apparatus is to set up and allowance should be made for ice in winter when figuring capacity. The pond should be well fenced, or its banks gently sloped so that children may not slip in and drown, as has happened in several cases.

Even a small water supply is helpful at times, but disaster may still be the result if the supply is inadequate, or out of reach for apparatus.

Bob Hatch Farm, Granby, Mass. Water from this pond helped to save a 10-room house from fire. Hatch built the ½-acre pond following a Soil Conservation Service design and aided by SCS technicians. *(Photo courtesy Soil Conservation Service.)*

THE BOOTS THAT HELP FIGHT FIRES

—and stand up to this tough job *one third longer* than ordinary boots because they're made of an extremely tough rubber compound.

Designed for firemen exclusively with many special features: Thick-cleated, white, wrap-around outsole for maximum foot protection and visibility; built-in maplewood shank for comfort on ladders; stay-open reinforced collar.

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- Thick-cleated outsoles for perfect grip.
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- Wool felt lining with air-cushion insole.
- Smooth, snag-resistant 8 oz. duck construction.
- Firmly anchored, large pull-on loops.

U. S. Royal Firefighter Coats

100% waterproof coats take a drenching, yet keep a man dry. Sturdy black rubber with warm, napped maroon-colored linings. Roomy, 2-piece body—raglan shoulders for action; fly-front in instant snap-and-dee fasteners; large patch pockets. All seams are cemented, outside gum-strapped; entire coat is then vulcanized.

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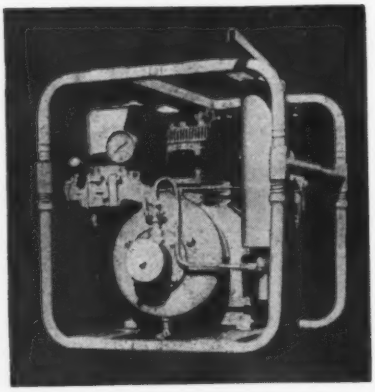
Fight Brush Fires From Moving Truck with a HALE Type FZZ PORTABLE PUMPING UNIT

Picture below shows fire-fighter handling stream from a Hale Type FZZ Portable Pumping Unit mounted on a moving truck. An FZZ can be mounted permanently on truck or carried as a portable unit for pumping into or *from* booster tank. This portable arrangement is extremely useful both for fighting brush, field or forest fires while in motion; or pumping from pond, stream or well direct.

An FZZ will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using nozzle tips up to ½".

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. Unit is also available mounted on two wheels or on rubber-cushioned steel channels.



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QUALITY *and* **SAFETY**

The improved Powhatan "Sensible-Lug Couplings" are precision tooled and manufactured of only the best high-grade materials. They set a standard that is "tops" in this specialized field of fire-fighting equipment. The curved surfaces of this modern coupling enable the hose to glide easily over all obstructions, thus preventing snagging, an important safety and economical feature appreciated by those who know.

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Fire Service Meetings

FROM time to time FIREMEN will report activities of various state fire chiefs' and firemen's associations. Readers are invited to submit items which will help to give greater coverage to such activities.

Wisconsin: At its Annual Conference held at Green Bay, Wisconsin, July 20-22, the Wisconsin State Fire Chiefs' Association elected the following chiefs: Charles J. Morris, Sharon, President; William J. Gleason, Green Bay, First Vice President; George K. Johnson, Mequon, Second Vice President; Douglas J. Dunlop, Wauwatosa, Secretary-Treasurer; and Chris M. Bertelsen, Shorewood Hills, Sergeant-at-Arms.

E. A. Greunke, Appleton, is Past President of the Association. Trustees are: Edward Joseph Page, Madison; Claire Knoll, Beaver Dam; Olaf Sorenson, Superior.

The next conference will be held at Beloit, July, 1954, with Chief Glen Davis as host.

Louisiana: The 48th Annual Conference of the Louisiana State Firemen's Association was held at the Heidelberg Hotel, Baton Rouge, August 19-22, with President Irby Gascon of Plaquemine presiding, according to the News Letter prepared by the Association's Secretary, Dr. B. J. Barrodale of Houma.

State Fire Marshal Sidney S. Bowman, in his August News Letter, reported that 237 persons from 10 states participated in the 2nd Annual Arson and Fire Prevention Conference held by his department. He further reports that as a result of 328 arson investigations conducted by his department in 1952 charges were filed in 47 cases resulting in 28 convictions and 8 commitments to mental institutions, and pays tribute to fire chiefs, firemen, and law enforcement agencies for the cooperation that made the convictions possible.

Dates to Remember

Kansas: The 24th Annual Kansas State Fire School will be held at the University of Kansas, Hutchinson, October 20-23. Write to Gerald Pearson, Director, Extension Classes, 111 Fraser Hall, University of Kansas, Lawrence, Kansas.

Illinois: The 3rd Annual Conference of the Illinois Fire Chiefs' Association will be held on Saturday and Sunday, December 5-6, at the Hotel Wolford, Danville, Illinois. Write to Secretary Arthur Holtz, 822 Hillgrove Avenue, Western Springs, Illinois.

Nebraska: The 71st Annual Meeting of the Nebraska State Volunteer Firemen's Association will be held in Omaha, October 19-21. Hotel Paxton, headquarters. Write to Russell D. Salak, Sec.-Treas., Box 312, Schuyler, Nebraska, for information.

FIRES IN THE NEWS

Pueblo, Colorado, Aug. 29. (*Associated Press Wirephoto.*) One man was killed, three buildings destroyed, and seven others damaged in this estimated $500,000 fire, which had made considerable progress before discovery. Pueblo fire fighters are shown directing stream on the 5-story brick Central Block building which collapsed 25 minutes after first apparatus arrived.

Wilmington, California, Aug. 28. (*United Press Photo.*) During filling procedures a 35,000-barrel gasoline tank was allowed to overflow and the spill flowed downhill approximately 500 feet to an asphalt plant. Burners in this plant ignited the gasoline vapors and flames spread back to involve the first tank and adjacent tank of similar size and content.

Cleveland, Ohio, Aug. 16. (*Associated Press Wirephoto.*) Fire walls saved the dwellings (right) when 15 million feet of lumber and 27 buildings were destroyed in this lumber yard fire. Damage was estimated at $2,000,000.

Liberal, Kansas, Aug. 21. (*Wide World Photo.*) A tractor and semi-trailer carrying a harvest thresher collided with a propane gas transport truck on this 1240-ft. wooden bridge. The collision broke fuel line connections and the gas ignited. Estimated damage to vehicles and the bridge was $228,000.

Toronto, Ontario, Aug 19. (*Toronto Globe and Mail Photo.*) Nineteen fire companies responded to this fire in a 3-story brick hardware supply store. The 2nd and 3rd floors and a large abount of the contents were damaged for an estimated loss of $150,000.

(*At right*) **Philadelphia, Pennsylvania, Aug. 24.** (*United Press Photo.*) Fire started in a motor of a bag folding machine, ignited burlap lint in the immediate vicinity, then spread rapidly through this 5-story brick building with timber floors and steel roofing. Electric fans helped to assist spread of flames. The burlap was impregnated with copper naphthenate. Fire fighters used "wet" water successfully to establish control of the fire.

"X" Marks the Spot in TOLEDO

Chief Papenhagen — whose new headquarters station is featured on the front cover of the current issue of "FIRE STATION DESIGN" says: "Sure — we're 'x-ing' out towers in all of our stations as rapidly as we can. We have Circul-Air Dryers in every new station and plan to replace all existing towers with them in the older houses. We save thousands of dollars in construction costs . . . many man hours of drying time and labor and . . . equally important . . . our men *like* them."

Accepted
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No other drying method is so fast — so economical — so easy to use. If *you* haven't enjoyed the benefits of Circul-Air, we suggest you investigate its merits now.

If you're building, write for free copy "Fire Station Design" Volume No. 4

THE CIRCUL-AIR CORPORATION

575 East Milwaukee ..... Detroit 2, Mich.

Rockford Fire Department photo by Franklin Lindberg

Ford ranch wagon purchased by Rockford Fire Department from funds obtained from service charges for salvage work.

Salvage Work Brings Cash to Rockford Fire Department

LIKE many other fire departments, that of Rockford, Illinois, under Chief Wayne E. Swanson (member NFPA-IAFC Committee on Fire Department Equipment) receives many calls from merchants and property owners for the loan of salvage covers and assistance in salvage work. Many such calls are in connection with water damage not directly connected with fire fighting service.

In an effort to handle such calls in a sympathetic and systematic manner, and to bring in some extra income for the fire department, an ordinance was adopted in 1937 setting up a rental fee of 50c per day for the use of salvage covers. The idea of charges worked out very satisfactorily from the point of view of local merchants who could thus get needed covers promptly in an emergency. Also, the charges were an inducement to return covers promptly when an emergency was over.

However, in a number of instances of water damage due to storm or other causes occurring at night or on holidays it was difficult for property owners to get employees to the scene quickly and the help of the fire department was needed to prevent added damage. Accordingly, in October 1951, upon the recommendation of Chief Swanson, the original ordinance was amplified and a new ordinance was passed by the city council by which a fee of $3.00 per hour per fireman is charged for salvage work performed at waterflow alarms in commercial and industrial establishments. The ordinances also provide for a flat fee of $15 for covering display windows with a tarpaulin and raised the rental fee for salvage covers to $2.00 for the first day and $1.00 per day thereafter.

The ordinances further provide that all monies collected be deposited in special funds to be used by the Fire Marshal (chief) "for the purchase of fire fighting and associated equipment."

Earlier this year Chief Swanson used more than $1700 from the salvage service fund for a new ranch wagon for the Fire Prevention Bureau (picture above). It is expected that a second similar vehicle will be bought for the Bureau this year from funds on hand.

The separate salvage cover rental fund has permitted the department to build up an excellent inventory of salvage covers and equipment. Each of three ladder trucks carry 42 covers. Engine companies carry a large "roofer" cover used to protect attic floors, plus varying numbers of standard size covers.

Some 320 covers have been purchased and a balance of over $1000 remains in the cover rental fund.

The department does not object to having fire companies perform water damage prevention work because all companies are radio equipped and are in touch with headquarters should a fire call be received.

The salvage program has proved to be an excellent form of public relations according to Chief Swanson.

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Inter-County Activities in New York State

By Captain William Paul Babcock, Nyack Fire Department

TO PROMOTE unity of action and fraternal relations among fire organizations in Southeastern New York State, an "Inter-County Relations Committee" functions and represents 6 counties, 265 fire companies, and approximately 30,000 volunteer firemen. Rockland, Orange, Ulster, Sullivan, Dutchess and Putnam Counties all have members on the Committee, which meets quarterly in Newburgh to investigate, discuss, and act upon subjects of interest to the fire organizations.

Present Chairman of the Committee is Charles H. Draudt, former Chief of the Valley Cottage, N. Y., Fire Department, who was appointed in 1951 and who is credited with unifying the actions of the various fire organizations in one central organization. One advantage of the Committee is that it allows constant and direct contact with its member organizations and allows quick remedial action on local problems.

One illustration of how such action can be taken concerns the Department of Water Supply of New York City. Plans had been proposed to that department which would have deprived several small communities of water supply for fire fighting. Representing the Committee, Chief Draudt travelled to Albany at his own expense and convinced legislators and officials of the inadvisability of such plans.

The Inter-County Relations Committee also was instrumental in forming a regional legislative clearing house which has been useful to firemen of the Lower Hudson River Valley who desire to present matters before the State Clearing House in Albany.

The Committee actively encourages fire prevention activities, and recently appealed to all concerns in the area which purchased calendars to lend emphasis to Fire Prevention Week by having the dates printed in red. The Committee also requested the State Department of Education for thorough application of Section 808 of the Education Law, which states that fire prevention shall be taught in every school in the State for a minimum of 15 minutes per week.

ANOTHER form of inter-county activities concerns the formation and coordination of fire police. Rockland County had established a Fire Police Association in 1939, unifying the several fire police squads in that county. Chief Draudt has been instrumental in developing similar associations in Sullivan, Ulster, Columbia and Putnam Counties, and other counties are studying the use of fire police.

Chief Draudt believes that such fire police are primarily volunteer firemen and hence must be under direct authority of the fire chief in their community. Thus, when serving as fire police, they still are protected by State laws pertaining to volunteer firemen. In Rockland County police chiefs have been encouraged to use the fire police for public gatherings, emergencies, or other occasions when the local police staff require assistance. Particularly at parades the addition of fire police for patrolling the line of march and directing traffic has been helpful. And, since the fire police report for duty at all fires, fire fighting personnel are aided considerably by clearance of traffic and onlookers from the vicinity. A State Fire Police Association is now under consideration.

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60th Anniversary for Laurel Springs Fire Department

This month the Laurel Springs, New Jersey, Fire Department celebrates the 60th anniversary of its organization. Founded in October, 1893, the Department has operated continually since its early days of hand-drawn hose carts and fire buckets. Present equipment is shown above in front of the fire station. (*Left to right*) A 1942 Chevrolet truck with a 500 gpm front mount pump and a 300 gallon tank; a 1947 Chevrolet emergency truck with breathing equipment, rowboat, and other rescue equipment; a 1927 Reo ladder truck (to be replaced this year); and a 1947 Dodge with a 500 gpm pump and a 300 gallon tank. Chief N. P. Alexander, Jr., and Assistant Chief W. A. Myers head the two fire companies, which include 37 active fire fighters. The Department has prepared an attractive anniversary booklet explaining its growth since early days.

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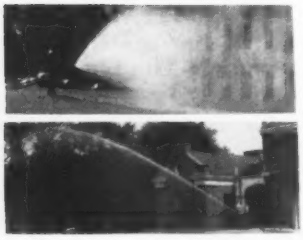
What's New in Fire Equipment?



New Fog Nozzles

Bete Fog Nozzle, Incorporated, 85 Pierce Street, Greenfield, Massachusetts, has announced two new fog nozzles for 1½-in. hose. One is the low capacity G-10, capable of delivering a fog of 25 gpm and a straight stream of 40 gpm at 100 pounds pressure. The other model, G-15, delivers fog at 50 gpm, a straight stream of 70 gpm, at 100 pounds pressure. Both models operate on the same principle of the Factory Mutual approved Model G-5 for booster hose and garden hose, and are constructed of stainless steel and chrome plated bronze. The G-15 is shown above operating in fog and straight stream positions. Further information may be obtained from the manufacturer at the above address.

Book on Generating Plants

D. W. Onan & Sons, Incorporated, Minneapolis, Minnesota, has issued a "Blue Book" of general information concerning the selection of engine-driven electric generating plants, including AC, DC and battery charging types. Plant operation for each type is discussed. Gasoline, Diesel, and gas engines as prime mover types are reviewed and the cost of operation and installation of each type is discussed. Differences of engine cooling are compared, starting methods are described and a concise summary of important points to remember in selection of an electric generating plant is also included. Copies may be obtained by writing to the manufacturer at the above address.

Lightweight Coupling

Akron Brass Manufacturing Company, Incorporated, Wooster, Ohio, has developed a new lightweight coupling for fire hose. Called the "Forgex" coupling, it is a brass forged product which, manufacturer claims, weighs only half as much as a cast coupling, yet has greater strength. Patent is pending on the new style coupling which is unconditionally guaranteed by the manufacturer. Further information and descriptive material may be obtained by writing to the manufacturer.

Speaking Diaphragms in MSA Equipment

Demand-type oxygen and air masks and apparatus supplied by Mine Safety Appliances Company, Braddock, Thomas and Meade Streets, Pittsburgh, Pennsylvania, will include speaking diaphragms as standard equipment, the manufacturer has announced. The diaphragm permits voice transmission from the wearer to other persons. Sound powered telephone equipment also may be used with the speaking diaphragms. Details on all MSA equipment may be obtained by writing to the manufacturer at the above address.

New Foam Eductor

Rockwood Sprinkler Company, 38 Harlow Street, Worcester 5, Massachusetts, has announced four models of foam eductors for use in 1½-in. and 2½-in. fire hose lines. The eductors may be used anywhere in a run of hose but maximum recommended length of hose between eductor and nozzle is 100 feet. Manufacturer states that the eductor will pick up the proper quantity of foam liquid over an operating pressure range of 75 to 175 pounds at the eductor inlet. Special eductors are also available for use with wetting agents. Write to the manufacturer for data sheet and further information.

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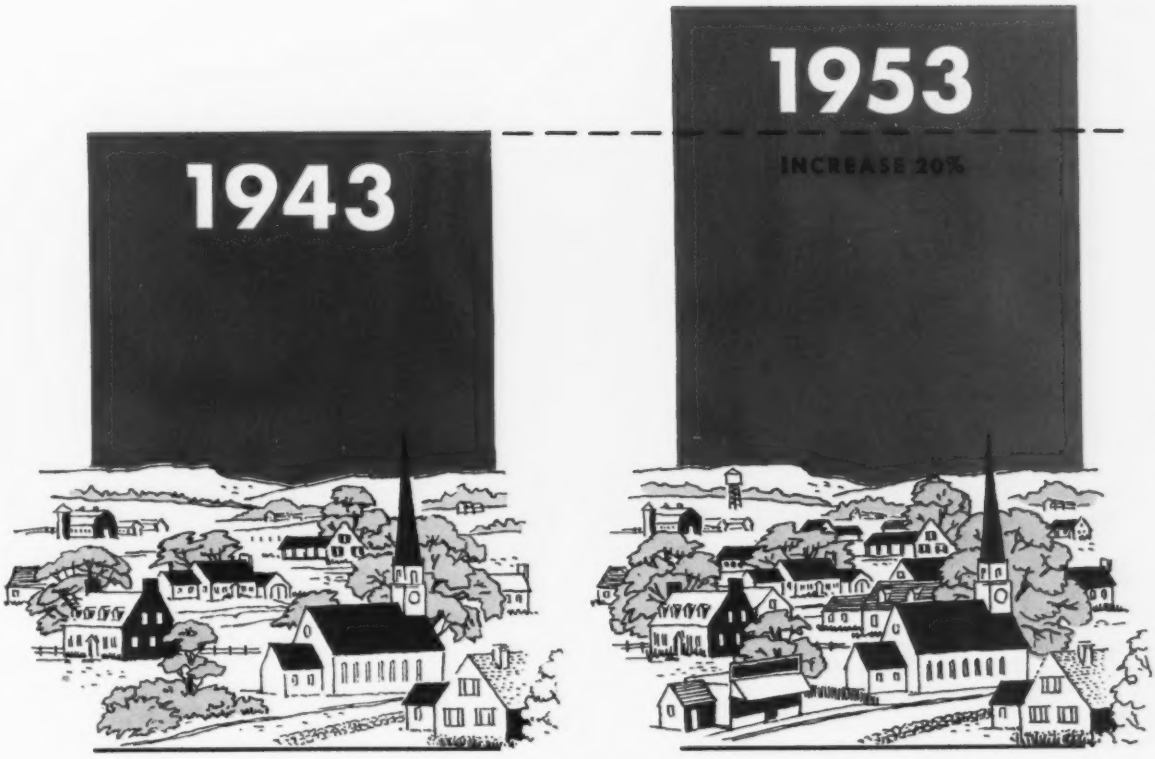

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